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From: Beeler, Cindy
Sent: Wed 10/14/2015 11:15:44 PM
Subject: U&O FIP - Emission Reductions By Pollutant

Gail –

Here are summary level numbers of the emission reductions, by pollutant, that we estimate would be achieved by:

- Retrofitting existing high-bleed pneumatics with low bleed at all facilities (we assume 20% of pneumatics are high-bleed now)
- Controlling tanks, dehyds and pneumatic pumps at all existing facilities which have => 5 TPY VOC and have tanks + dehyds + pumps => 4 TPY
- Implementing LDAR at all existing facilities which have => 5 TPY VOC and have tanks + dehyds + pumps => 4 TPY

EMISSION REDUCTIONS at		- Facilities => 5 TPY VOC AND	
		- Where sum Tank + Dehy + Pump => 4 TPY VOC	
Equipment	VOC (TPY)	Methane (TPY)	HAPS (TPY)
Glycol Dehydrators	15,506	1,191	7,291
Condensate/Oil Storage Tanks	14,334	4,616	895
Pneumatic Pumps	5,870	34,455	276
Pneumatic Controllers (all facilities)	5,116	30,029	240
LDAR	1,374	8,064	65
TOTAL	42,201	78,356	8,767
CO2 equivalent (MT/yr)		1,778,290	
CO2 equiv. w/ CH4 combustion (MT/yr)		1,551,459	

These numbers come from data submitted by operators in their Tribal Registrations and we have these emission reductions calculated numbers by operator too. We have accounted for any tanks that have been indicated in the registrations to already being controlled.

As a reminder, here again is the breakdown by constituent of the dehy emissions so you can discuss reactivity benefit in reducing dehydrator emissions:

Row Labels	Sum of Dehy VOC (tpy)	Benzene (TPY)	Toluene (TPY)	Ethylbenzene (TPY)	Xylene (TPY)	n-
Anadarko Uintah Midstream, LLC	8	0.04	0.05	0.00	0.02	
Bill Barrett Corporation						
Crescent Point Energy U.S. Corp						
Enduring Resources, LLC						
EOG Resources, Inc.	6,500	619	1,557	56	1,075	
EP Energy E&P Company, L.P.						
Gasco Energy, Inc						
Kerr-McGee Oil and Gas Onshore LP						
Koch Exploration Company	474	38	97	4	75	
Newfield Production Company	58	7	12	2	9	
QEP Energy Company	328	13	11	0	4	
QEP Field Services Company	8	1	2	0	1	
Red Rock Gathering Company, LLC						
Rosewood Resources, Inc.						
Ultra Resources, Inc.	26	5	6	0	2	
Ute Energy, LLC						
Whiting Petroleum Company	68	25	21	1	5	
XTO Energy, Inc	8,352	821	1,442	37	1,265	
Grand Total	15,822	1,530	3,148	101	2,436	
# of Glycol Dehydrator Units/Facilities	1852					
Emission reductions achieved at	98%					
	15,506	1,499	3,085	99	2,387	

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